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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/2
19315 AT MLRS, MISSILE NUMBERS V13-002, V15-003, ROUND NUMBERS --ETC(U)
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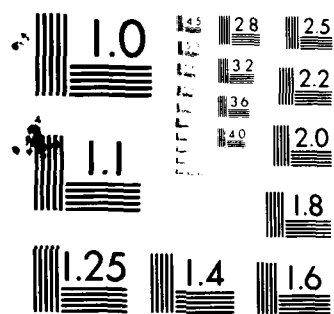
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METEOROLOGICAL DATA REPORT
19315 AT MLRS
Missile Numbers V13-002, V15-003
Round Numbers V-185/AT-9, V-186/AT-10
18 August 1981

by

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Program Support Coordinator
Phone Number (505) 679-9568
AVN Number 349-9568

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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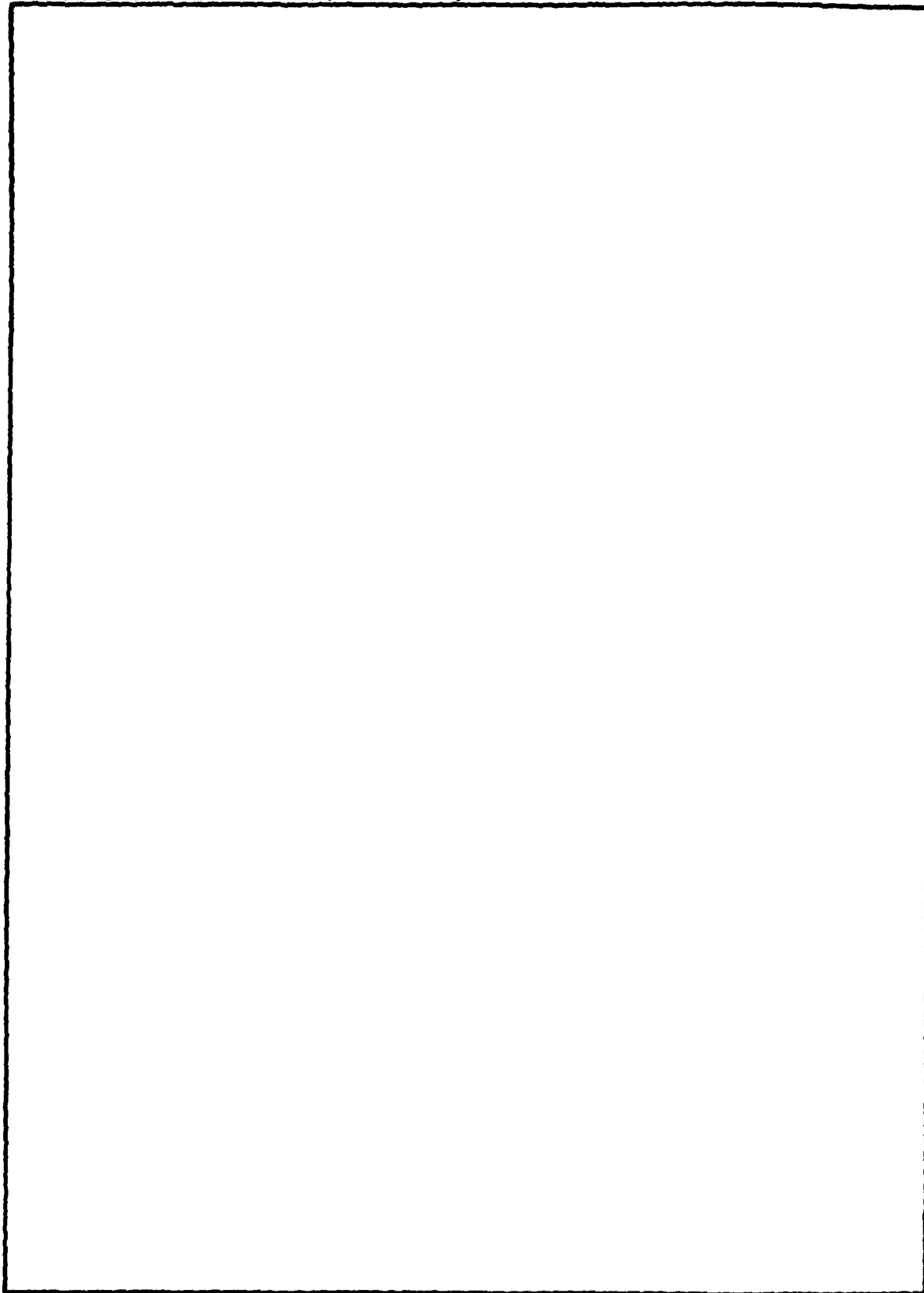
(9) Meteorological data rept.,

(10) Donald C. /Keller

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INTRODUCTION

19315AT MLRS, Missile Numbers V-13-002 and V-15-003, Round Numbers V-185/AT-9 and V-186/AT-10, were launched from LC-33, White Sands Missile Range, (WSMR) New Mexico, at 1130 and 1230 MDT, 18 Aug 1981. The scheduled launch times were 1130 and 1230 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations.

a. Surface:

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind speed and direction, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air:

(1) Low level wind data were obtained from Pilot-Balloon observations at:

SITE AND ALTITUDE

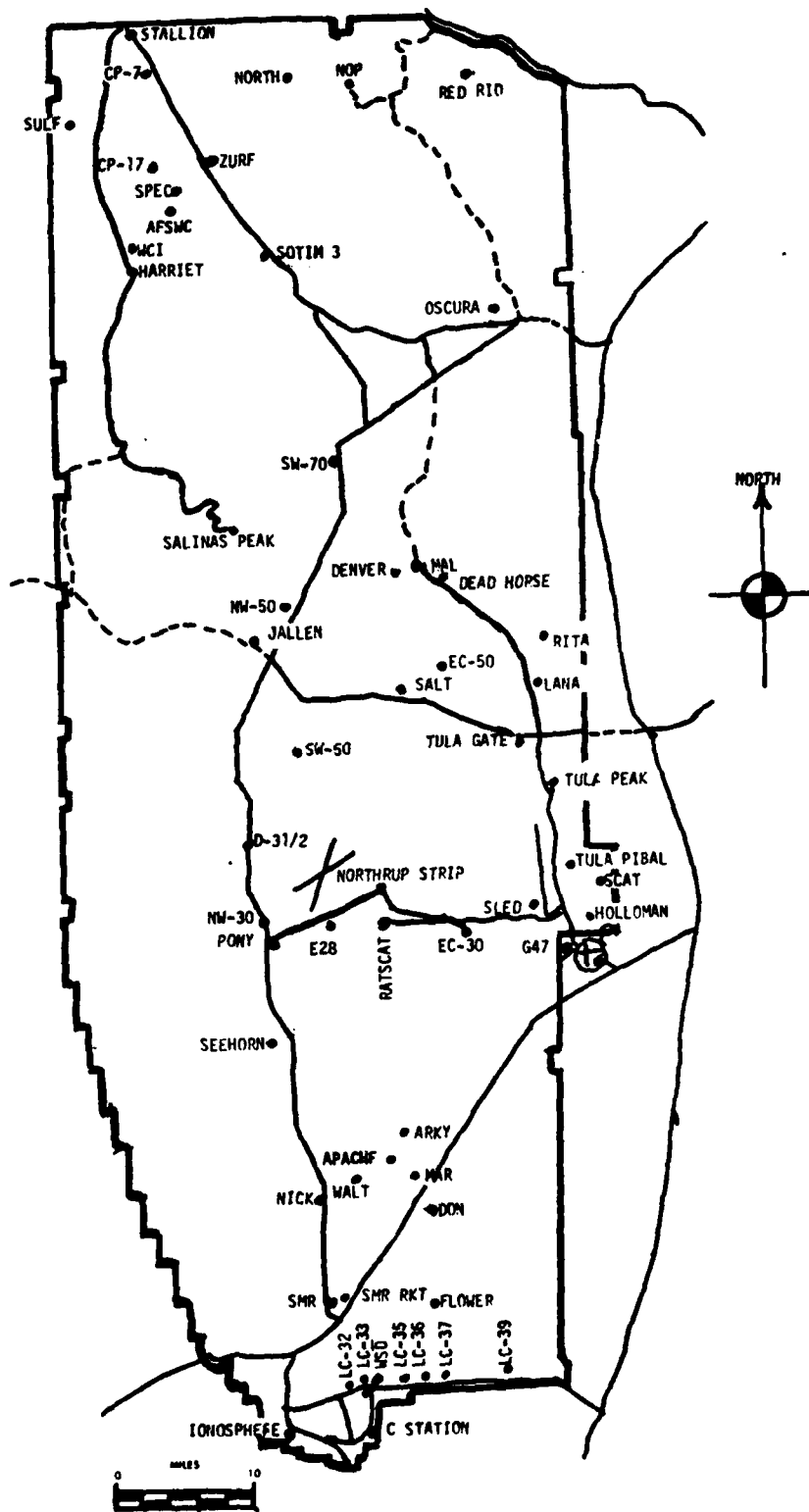
| | |
|-------|------|
| LC-33 | 2 KM |
| SMR | 2 KM |

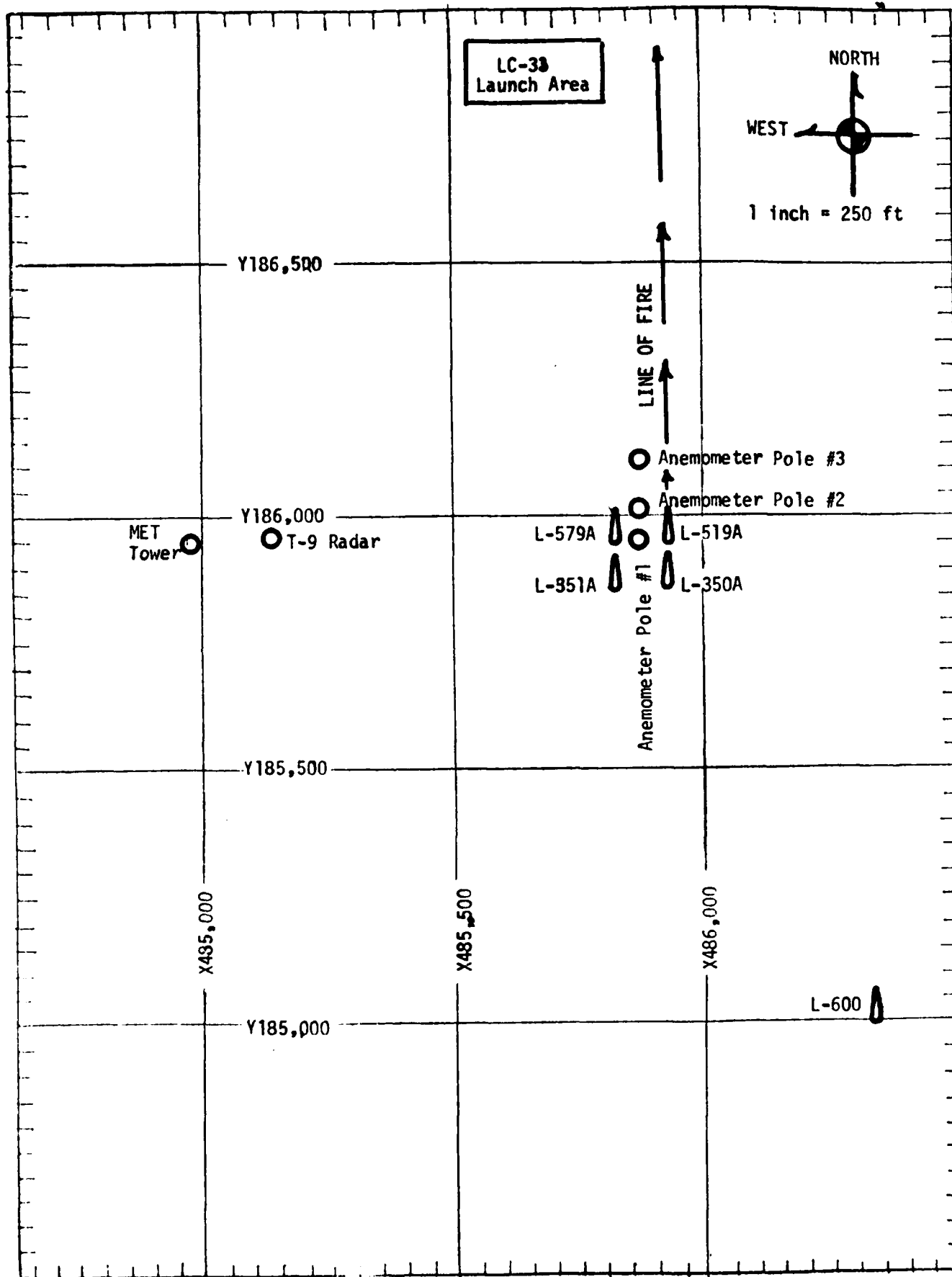
(2) Air structure data (rawinsonde) were collected at the following Met Sites:

SITE AND TIME

| | |
|-----|----------|
| WSD | 0830 MDT |
| WSD | 0930 MDT |
| WSD | 1030 MDT |
| WSD | 1130 MDT |
| WSD | 1230 MDT |

WSMR METEOROLOGICAL SITES





PROJECT SURFACE OBSERVATION

| TABLE 1 | | STATION LC-33 | | | | | | | | | |
|------------------|-----------------|---|-------------------|-----------------|-----------------|---------------------------|------------------------------|-------------------|----------------------|------------------|-----------------|
| DATE 18 Aug 1981 | | X= 485,135.76 Y= 185,919.24 H= 3,988.60 | | | | | | | | | |
| DAY MONTH YEAR | | | | | | | | | | | |
| TIME M D I | PRESSURE mbs | TEMPERATURE oF | TEMPERATURE oC | DEW POINT oF | DEW POINT oC | RELATIVE HUMIDITY % | DENSITY gm/m ³ | DIRECTION degs | WIND SPEED kts | CHARACTER kts | VISIBIL- ITY |
| 1130 | 883.2 | | 25.7 | | 17.4 | 60 | 1028 | C A L | M | | 50 |
| 1230 | 882.9 | | 26.9 | | 17.3 | 55 | 1024 | 150 | 02 | | 50 |
| | | | | | | | | | | | |

| OBSTRUCTIONS TO VISIBILITY | CLOUDS | | | | | | REMARKS |
|-------------------------------|-----------|------|-----------|------|-----------|--------|---------|
| | 1st LAYER | | 2nd LAYER | | 3rd LAYER | | |
| | AMT | TYPE | AMT | TYPE | AMT | TYPE | |
| | 2 | CU | 6,000 | 1 | AC | 10,000 | |
| | 3 | CU | 6,000 | 1 | AC | 10,000 | |
| | | | | | | | |

PSYCHROMETRIC COMPUTATION

| | | | |
|-----------------|-----|------|------|
| TIME: | MDT | 130 | 1230 |
| DRY BULB TEMP. | | 25.7 | 26.9 |
| WET BULB TEMP. | | 19.9 | 20.2 |
| WET BULB DEPR. | | 5.8 | 6.7 |
| DEW POINT | | 17.4 | 17.3 |
| RELATIVE HUMID. | | 60 | 55 |

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

| POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL | | | POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL | | | POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL | | |
|---|------------|--------------|---|------------|--------------|---|------------|--------------|
| T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS |
| T-30 | C A L M | | T-30 | C A L M | | T-30 | 128 | MISG |
| T-20 | C A L M | | T-20 | C A L M | | T-20 | 118 | MISG |
| T-10 | C A L M | | T-10 | C A L M | | T-10 | 096 | MISG |
| P.0 | C A L M | | T0.0 | 105 | MISG | T 0.0 | 096 | MISB |
| T+10 | C A L M | | T+10 | 110 | MISG | T +10 | 125 | MISG |

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

| LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | | LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | |
|--|---------|-----------|--|---------|-----------|
| T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS |
| T-30 | 047 | MISG | T-30 | C A L M | |
| T-20 | 083 | MISG | T-20 | C A L M | |
| T-10 | 083 | MISG | T-10 | 064 | MISG |
| P.0 | 056 | MISG | T0.0 | 058 | MISG |
| T+10 | 120 | MISG | T+10 | 088 | MISG |

| LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | | LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base) | | |
|---|---------|-----------|--|---------|-----------|
| T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS |
| T-30 | 073 | MISG | T-30 | 080 | MISG |
| T-20 | 084 | MISG | T-20 | 080 | MISG |
| T-10 | 081 | MISG | T-10 | 083 | MISG |
| P.0 | 081 | MISG | T0.0 | 088 | MISG |
| T+10 | 084 | MISG | T+10 | 094 | MISG |

TABLE 4 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

| POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL | | | POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL | | | POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL | | |
|---|------------|--------------|---|------------|--------------|---|------------|--------------|
| T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS |
| T-30 | 097 | MISG | T-30 | 245 | MISG | T-30 | 129 | MISG |
| T-20 | 104 | MISG | T-20 | 236 | MISG | T-20 | 132 | MISG |
| T-10 | 110 | MISG | T-10 | 236 | MISG | T-10 | 145 | MISG |
| T 0.0 | 104 | MISG | T 0.0 | 232 | MISG | T 0.0 | 129 | MISG |
| T +10 | 113 | MISG | T +10 | 238 | MISG | T +10 | 129 | MISG |

TABLE 5 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

| LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | | LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | |
|--|---------|-----------|--|---------|-----------|
| T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS |
| T-30 | 252 | MISG | T-30 | 234 | MISG |
| T-20 | 273 | MISG | T-20 | 227 | MISG |
| T-10 | 298 | MISG | T-10 | 196 | MISG |
| T 0.0 | 299 | MISG | T 0.0 | 186 | MISG |
| T +10 | 256 | MISG | T +10 | 120 | MISG |

| LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | | LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base) | | |
|---|---------|-----------|--|---------|-----------|
| T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS |
| T-30 | C A | L M | T-30 | 132 | MISG |
| T-20 | C A | L M | T-20 | 137 | MISG |
| T-10 | 220 | MISG | T-10 | 138 | MISG |
| T 0.0 | 178 | MISG | T 0.0 | 166 | MISG |
| T +10 | 173 | MISG | T +10 | 172 | MISG |

TABLE 6

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 18 Aug 1981

SITE: LC-33

TIME: 1130 MDT

WSTM COORDINATES:

X= 484,837.34

Y= 184,124.44

H= 3,975.57

SITE: SMR

TIME: 1130 MDT

WSTM COORDINATES:

X= 472,257.00

Y= 214,426.00

H= 3,999.00

| LAYER MIDPOINT METERS AGL | DIRECTION DEGREES | SPEED KNOTS |
|------------------------------|----------------------|----------------|
| SURFACE | 100 | 02 |
| 150 | M I S G | |
| 210 | M I S G | |
| 270 | 105 | 04 |
| 330 | 124 | 08 |
| 390 | 125 | 09 |
| 500 | 110 | 09 |
| 650 | 113 | 10 |
| 800 | 118 | 08 |
| 950 | 137 | 06 |
| 1150 | 153 | 06 |
| 1350 | 143 | 03 |
| 1550 | 287 | 03 |
| 1750 | 326 | 04 |
| 2000 | 002 | 04 |

| LAYER MIDPOINT METERS AGL | DIRECTION DEGREES | SPEED KNOTS |
|------------------------------|----------------------|----------------|
| SURFACE | C A L M | |
| 150 | 113 | 05 |
| 210 | 111 | 04 |
| 270 | 121 | 03 |
| 330 | 149 | 04 |
| 390 | 170 | 04 |
| 500 | 225 | 03 |
| 650 | 192 | 06 |
| 800 | 161 | 06 |
| 950 | 171 | 04 |
| 1150 | 152 | 02 |
| 1350 | 277 | 05 |
| 1550 | 286 | 04 |
| 1750 | 354 | 06 |
| 2000 | M I S G | |

All data obtained from Single Theodolite Tracked Pilot-Balloon Observations.

TABLE 7

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 18 Aug 1981

SITE: LC-33
 TIME: 1230 MDT
 WSTM COORDINATES:
 X= 484,837.34
 Y= 184,124.44
 H= 3,975.57

SITE: SMR
 TIME: 1230 MDT
 WSTM COORDINATES:
 X= 472,257.00
 Y= 214,426.00
 H= 3,999.00

| LAYER MIDPOINT METERS AGL | DIRECTION DEGREES | SPEED KNOTS |
|------------------------------|----------------------|----------------|
| SURFACE | 150 | 02 |
| 150 | 084 | 03 |
| 210 | 081 | 04 |
| 270 | 096 | 05 |
| 330 | 107 | 05 |
| 390 | 115 | 06 |
| 500 | 121 | 06 |
| 650 | 137 | 05 |
| 800 | 170 | 06 |
| 950 | 182 | 05 |
| 1150 | 201 | 04 |
| 1350 | 227 | 03 |
| 1550 | 354 | 07 |
| 1750 | 351 | 09 |
| 2000 | 350 | 08 |

Data obtained from Double Theodolite
 Tracked Pilot-Balloon Observations.

| LAYER MIDPOINT METERS AGL | DIRECTION DEGREES | SPEED KNOTS |
|------------------------------|----------------------|----------------|
| SURFACE | C A L M | |
| 150 | 177 | 07 |
| 210 | 175 | 07 |
| 270 | 169 | 07 |
| 330 | 161 | 06 |
| 390 | 152 | 05 |
| 500 | 141 | 05 |
| 650 | 166 | 05 |
| 800 | 211 | 04 |
| 950 | 267 | 03 |
| 1150 | 318 | 04 |
| 1350 | 324 | 05 |
| 1550 | 339 | 07 |
| 1750 | 359 | 09 |
| 2000 | 359 | 09 |

Data obtained from Single Theodolite
 Tracked Pilot-Balloon Observations.

TABLE 8

AIMING AND T-TIME COMPUTER MET MESSAGES
18 Aug 1981

WSD 0830 MDT

METCM1324064

181450122883

| | |
|----------|----------|
| 00089004 | 29650883 |
| 01005006 | 29550872 |
| 02634003 | 29360848 |
| 03146004 | 29140809 |
| 04018002 | 28870763 |
| 05585008 | 28590719 |
| 06604007 | 28290677 |

WSD 0930 MDT

METCM1324064

181550122883

| | |
|----------|----------|
| 00107002 | 29860883 |
| 01004007 | 29650873 |
| 02272001 | 29360848 |
| 03204006 | 29140809 |
| 04000000 | 28870763 |
| 05588009 | 28610719 |
| 06588009 | 28260677 |

WSD 1030 MDT

METCM1324064

181650122883

| | |
|----------|----------|
| 00480002 | 30000883 |
| 01190003 | 29820873 |
| 02282004 | 29500848 |
| 03241005 | 29240810 |
| 04000000 | 28940764 |
| 05604008 | 28640720 |
| 06603010 | 29310678 |

WSD 1130 MDT

METCM1324064

181750122883

| | |
|----------|----------|
| 00169007 | 30020883 |
| 01317006 | 29900873 |
| 02162008 | 29610848 |
| 03278004 | 29260810 |
| 04494002 | 28880764 |
| 05625008 | 28600720 |
| 06604012 | 28280678 |
| 07009009 | 27910638 |

WSD 1230 MDT

METCM1324064

181850122883

| | |
|----------|----------|
| 00302003 | 30200883 |
| 01173002 | 29950873 |
| 02204005 | 29650848 |
| 03275005 | 29290810 |
| 04549002 | 28900764 |
| 05617008 | 28580720 |
| 06009010 | 28230678 |
| 07014013 | 27900638 |
| 08024012 | 27550600 |

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

SIGNIFICANT LEVEL DATA

230020555
WHITE SANDS

TABLE 9

STATION ALTITUDE 3929.00 FEET MSL
14 AUG. 81 0800 HRS MDT
ASCENSION NC. 555

| PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET | TEMPERATURE | | REL. HUM. PERCENT |
|--|----------------|------------------------|----------------------|
| | AIR DEGREES | DEWPOINT CENTIGRADE | |
| 882.6 3985.0 | 20.5 | 18.4 | 88.0 |
| 852.0 4659.5 | 18.5 | 15.9 | 85.0 |
| 850.0 5055.4 | 18.1 | 13.2 | 73.0 |
| 700.0 10450.7 | 9.9 | 4.9 | 71.0 |
| 470.4 11628.5 | 7.5 | 5.5 | 87.0 |
| 635.6 13067.5 | 4.6 | .4 | 74.0 |

STATION ALTITUDE 2909.00 FEET MSL
12 AUG. E1 0830 HRS MDT
ASCENSION NO. 555

UPPER AIR DATA
2300Z0555
WHITE SANDS

GEOMETRIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 10

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA | | INDEX OF REFRACTION |
|--------------------------------|-----------------------|--|----------------------|------------------------------|----------------------------|---------------------------|----------------|---------------------------|
| | | | | | | DIRECTION DEGR(FS)(TN) | SPEED KNOTS | |
| 3959.0 | 882.6 | 20.5 | 86.0 | 1037.5 | 670.7 | 50.0 | 4.1 | 1.000375 |
| 4000.0 | 882.3 | 20.5 | 86.0 | 1037.3 | 670.6 | 50.1 | 4.1 | 1.000324 |
| 4500.0 | 866.9 | 19.0 | 85.7 | 1025.2 | 668.6 | 56.1 | 3.9 | 1.000312 |
| 5000.0 | 851.7 | 18.2 | 74.7 | 1011.4 | 667.2 | 62.4 | 3.8 | 1.000295 |
| 5500.0 | 836.5 | 17.4 | 72.8 | 996.3 | 666.3 | 69.1 | 3.7 | 1.000287 |
| 6000.0 | 821.6 | 16.7 | 72.6 | 981.3 | 665.3 | 74.8 | 3.7 | 1.000281 |
| 6500.0 | 806.9 | 15.9 | 72.5 | 966.5 | 664.4 | 75.7 | 3.5 | 1.000275 |
| 7000.0 | 792.6 | 15.1 | 72.3 | 952.0 | 663.4 | 76.2 | 3.2 | 1.000269 |
| 7500.0 | 778.4 | 14.4 | 72.1 | 937.7 | 662.5 | 56.4 | 2.1 | 1.000263 |
| 8000.0 | 764.5 | 13.6 | 71.9 | 923.6 | 661.6 | 11.5 | 1.6 | 1.000258 |
| 8500.0 | 750.9 | 12.9 | 71.7 | 909.7 | 660.6 | 341.7 | 3.5 | 1.000252 |
| 9000.0 | 737.5 | 12.1 | 71.5 | 896.0 | 659.7 | 334.1 | 5.6 | 1.000247 |
| 9500.0 | 724.4 | 11.3 | 71.4 | 882.5 | 658.8 | 331.9 | 7.2 | 1.000242 |
| 10000.0 | 711.4 | 10.6 | 71.2 | 869.3 | 657.8 | 331.0 | 8.4 | 1.000237 |
| 10500.0 | 698.7 | 9.8 | 71.7 | 856.2 | 656.9 | 332.7 | 7.8 | 1.000232 |
| 11000.0 | 686.0 | 8.8 | 78.5 | 843.5 | 655.7 | 335.1 | 7.2 | 1.000230 |
| 11500.0 | 673.6 | 7.8 | 85.3 | 831.1 | 654.6 | 341.2 | 6.7 | 1.000226 |
| 12000.0 | 661.2 | 6.8 | 83.6 | 819.1 | 653.3 | | | 1.000222 |
| 12500.0 | 649.1 | 5.7 | 79.1 | 807.4 | 652.0 | | | 1.000215 |
| 13000.0 | 637.2 | 4.7 | 74.6 | 795.8 | 650.7 | | | 1.000209 |

MANDATORY LEVELS
 230020555
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

STATION ALTITUDE 2089.00 FEET MSL
 18 AUG. 51 0800 HRS MDT
 ASCENSION NO. 555

TABLE 11

| PRESSURE GEOPOTENTIAL | | TEMPERATURE | | REL. HUM. | | WIND DATA | |
|-----------------------|--------|------------------------------|------------------------|-----------|--------------------------|----------------|--|
| MILLIBARS | FEET | AIR DEGREES CENTIGRADE | DEWPOINT CENTIGRADE | PERCENT | DIPECTION DEGREES(TN) | SPEED KNOTS | |
| 650.0 | 5052. | 19.1 | 13.2 | 73. | 67.1 | 3.8 | |
| 600.0 | 4752. | 15.5 | 10.6 | 72. | 76.2 | 3.4 | |
| 750.0 | 2546. | 12.8 | 7.9 | 72. | 240.5 | 3.7 | |
| 700.0 | 10446. | 9.9 | 4.9 | 71. | 332.5 | 7.9 | |
| 650.0 | 12451. | 5.3 | 2.5 | 79. | | | |

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

SIGNIFICANT LEVEL DATA
 230002056
 WHITE SANDS

TABLE 12

STATION ALTITUDE 3059.00 FEET MSL
 18 AUG. 81 C990 MRS M DT
 ASCENSION NO. 556

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE | | REL. HUM. PERCENT |
|-----------------------|-----------------------------------|----------------|------------------------|----------------------|
| | | AIR DEGREES | DEWPOINT CENTIGRADE | |
| 583.0 | 7929.0 | 23.0 | 17.2 | 70.0 |
| 866.4 | 4570.5 | 19.4 | 13.8 | 70.0 |
| 850.0 | 5070.6 | 18.1 | 12.1 | 68.0 |
| 700.0 | 10465.5 | 10.0 | 4.8 | 70.0 |
| 663.0 | 11136.6 | 8.5 | 2.9 | 66.0 |
| 665.4 | 11844.9 | 6.5 | 3.7 | 82.0 |
| 631.2 | 13264.7 | 4.0 | -0.6 | 72.0 |

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
2300020536
WHITE SANDS

STATION ALTITUDE 3059.00 FEET MSL
12 AUG. 81 0930 HRS MDT
ASCENSION NO. 556

TABLE 13

| CLOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION (TN) SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------------|-----------------------|--|----------------------|------------------------------|----------------------------|---|---------------------------|
| 5959.0 | 883.0 | 23.0 | 74.0 | 1029.9 | 673.3 | 60.0 | 1.000315 |
| 4000.0 | 852.7 | 22.9 | 70.0 | 1029.9 | 673.2 | 60.5 | 1.000314 |
| 4500.0 | 867.3 | 19.6 | 70.0 | 1024.9 | 668.9 | 83.2 | 1.000299 |
| 5000.0 | 852.1 | 18.3 | 68.3 | 1012.2 | 667.2 | 99.9 | 1.000290 |
| 5500.0 | 837.0 | 17.5 | 63.2 | 997.1 | 666.2 | 111.0 | 1.000283 |
| 6000.0 | 822.0 | 16.7 | 68.3 | 982.1 | 665.3 | 116.6 | 1.000278 |
| 6500.0 | 807.4 | 16.0 | 68.5 | 967.2 | 664.3 | 116.5 | 1.000272 |
| 7000.0 | 793.0 | 15.2 | 68.7 | 952.6 | 663.4 | 117.0 | 1.000266 |
| 7500.0 | 778.8 | 14.5 | 68.9 | 938.2 | 662.5 | 119.3 | 1.000261 |
| 8000.0 | 764.9 | 13.7 | 69.1 | 924.0 | 661.6 | 29.2 | 1.000256 |
| 8500.0 | 751.3 | 13.0 | 69.3 | 910.0 | 660.7 | 35.4 | 1.000251 |
| 9000.0 | 737.9 | 12.2 | 69.5 | 896.3 | 659.8 | 332.1 | 1.000246 |
| 9500.0 | 724.7 | 11.4 | 69.6 | 882.8 | 658.8 | 331.1 | 1.000241 |
| 10000.0 | 711.8 | 10.7 | 69.8 | 869.4 | 657.9 | 328.7 | 1.000236 |
| 10500.0 | 699.1 | 9.9 | 69.9 | 856.4 | 657.0 | 326.9 | 1.000231 |
| 11000.0 | 686.4 | 8.8 | 68.4 | 844.5 | 655.6 | 326.8 | 1.000225 |
| 11500.0 | 673.9 | 7.5 | 75.2 | 832.9 | 654.0 | | 1.000223 |
| 12000.0 | 661.6 | 6.2 | 80.9 | 821.3 | 652.6 | | 1.000220 |
| 12500.0 | 649.4 | 5.3 | 77.4 | 809.0 | 651.5 | | 1.000214 |
| 13000.0 | 637.4 | 4.5 | 73.9 | 796.9 | 650.3 | | 1.000208 |

STATION ALTITUDE 3942.00 FEET MSL
 18 AUG. 51 C 90 HRS M DT
 ASCENSION NO. 556

MANDATORY LEVELS
 230020556
 WHITE SANDS

TABLE 14

| PRESSURE GEOPOTENTIAL | | TEMPERATURE | | REL. HUM. | | WIND DATA | |
|-----------------------|--------|----------------|------------------------|-----------|--|--------------------------|----------------|
| MILLIBARS | FEET | AIR DEGREES | DEWPOINT CENTIGRADE | PERCENT | | DIRECTION DEGREES(TN) | SPEED KNOTS |
| | | | | | | | |
| 850.0 | 5067. | 18.1 | 12.1 | 69. | | 101.7 | 2.7 |
| 800.0 | 6767. | 15.6 | 9.8 | 67. | | 116.5 | 5.0 |
| 750.0 | 8559. | 12.9 | 7.4 | 65. | | 334.2 | 3.5 |
| 700.0 | 10455. | 10.0 | 4.8 | 70. | | 327.0 | 9.9 |
| 650.0 | 12463. | 5.4 | 1.8 | 78. | | | |

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

SIGNIFICANT LEVEL DATA

2300020557
WHITE SANDS

TABLE 15

STATION ALTITUDE 3989.00 FEET MSL
18 AUG. 83
ASCENSION NO. 557

| PRESSURE | GEOMETRIC ALTITUDE MILLIBARS MSL FEET | TEMPERATURE | | REL. HUM. PERCENT |
|----------|---|----------------|------------------------|----------------------|
| | | AIR DEGREES | DEWPOINT CENTIGRADE | |
| 983.2 | 3989.0 | 24.0 | 16.0 | 61.0 |
| 867.0 | 4515.8 | 21.4 | 14.3 | 64.0 |
| 850.0 | 5082.6 | 19.2 | 12.9 | 67.0 |
| 700.0 | 10489.9 | 10.2 | 3.9 | 65.0 |
| 629.2 | 12377.7 | 4.0 | -0.8 | 71.0 |

GEODETIC COORDINATES
32.4043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
2300G020557
WHITE SANDS

STATION ALTITUDE 3905.00 FEET MSL
15 AUG. 81 1030 HRS PDT
ASCENSION NO. 557

TABLE 16

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA | | INDEX OF REFRACTION |
|-----------------------------------|-----------------------|--|----------------------|------------------------------|----------------------------|--------------------------|----------------|---------------------------|
| | | | | | | DIRECTION DEGREES(TN) | SPEED KNOTS | |
| 3909.0 | 883.2 | 24.0 | 61.0 | 1027.3 | 674.2 | 270.0 | 1.9 | 1.000307 |
| 4000.0 | 882.6 | 23.9 | 61.1 | 1027.2 | 674.1 | 269.2 | 1.9 | 1.000307 |
| 4500.0 | 867.6 | 21.5 | 63.9 | 1018.4 | 671.1 | 195.7 | 1.3 | 1.000299 |
| 5000.0 | 858.5 | 19.5 | 66.6 | 1007.9 | 663.7 | 154.6 | 2.8 | 1.000292 |
| 5500.0 | 847.4 | 16.5 | 66.8 | 993.7 | 667.5 | 143.8 | 4.6 | 1.000285 |
| 6000.0 | 832.5 | 17.7 | 66.7 | 979.1 | 666.4 | 140.0 | 5.3 | 1.000279 |
| 6500.0 | 807.6 | 16.3 | 66.5 | 964.6 | 665.4 | 137.0 | 4.3 | 1.000273 |
| 7000.0 | 793.4 | 16.0 | 66.3 | 950.4 | 664.4 | 138.5 | 2.9 | 1.000267 |
| 7500.0 | 779.3 | 15.2 | 66.1 | 936.4 | 663.4 | 151.5 | 1.3 | 1.000261 |
| 8000.0 | 765.5 | 14.3 | 65.9 | 927.6 | 662.3 | 348.5 | .6 | 1.000255 |
| 8500.0 | 751.6 | 13.5 | 65.7 | 909.0 | 661.3 | 342.0 | 2.6 | 1.000250 |
| 9000.0 | 738.5 | 12.7 | 65.6 | 895.6 | 660.3 | 339.6 | 5.1 | 1.000244 |
| 9500.0 | 728.3 | 11.8 | 65.4 | 882.4 | 659.2 | 338.4 | 7.3 | 1.000239 |
| 10000.0 | 712.4 | 11.0 | 65.2 | 869.4 | 658.2 | 336.3 | 8.6 | 1.000234 |
| 10500.0 | 699.7 | 10.2 | 65.0 | 856.6 | 657.2 | 336.5 | 9.5 | 1.000229 |
| 11000.0 | 686.9 | 9.1 | 64.1 | 844.3 | 655.9 | 339.8 | 9.7 | 1.000224 |
| 11500.0 | 674.4 | 8.0 | 67.1 | 832.1 | 654.6 | 344.2 | 9.4 | 1.000220 |
| 12000.0 | 662.0 | 7.0 | 68.1 | 820.2 | 653.3 | 350.9 | 8.4 | 1.000216 |
| 12500.0 | 649.9 | 5.9 | 69.2 | 808.4 | 652.0 | | | 1.000211 |
| 13000.0 | 638.0 | 4.8 | 70.2 | 796.8 | 650.7 | | | 1.000207 |

STATION ALTITUDE 3959.00 FEET MSL
 18 AUG. 21 1030 HRS MDT
 ASCENSION NO. 557

MANDATORY LEVELS
 2300020557
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 17

| PRESSURE GEOPOTENTIAL | | TEMPERATURE | | REL. HUM. | | WIND DATA | |
|-----------------------|--------|----------------|------------------------|-----------|--|--------------------------|----------------|
| MILLIBARS | FEET | AIR DEGREES | DEWPOINT CENTIGRADE | PERCENT | | DIRECTION DEGREES(TN) | SPEED KNOTS |
| 850.0 | 5079. | 19.2 | 12.9 | 67. | | 152.0 | 3.1 |
| 800.0 | 6785. | 16.4 | 10.1 | 66. | | 136.5 | 3.6 |
| 750.0 | 8581. | 13.4 | 7.1 | 66. | | 141.4 | 3.0 |
| 700.0 | 10479. | 10.2 | 3.9 | 65. | | 336.4 | 9.5 |
| 650.0 | 12490. | 5.9 | .7 | 69. | | | |

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

SIGNIFICANT LEVEL DATA
2300020559
WHITE SANDS

STATION ALTITUDE 3929.00 FEET MSL
12 AUG. 81 1130 HRS MDT
ASCENSION NO. 552

TABLE 18

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE | | REL. HUM. PERCENT |
|-----------------------|-----------------------------------|----------------|------------------------|----------------------|
| | | AIR DEGREES | DEWPOINT CENTIGRADE | |
| 833.1 | 3989.0 | 24.7 | 15.1 | 55.0 |
| 850.0 | 5083.5 | 20.5 | 13.5 | 64.0 |
| 777.6 | 7587.9 | 14.3 | 9.7 | 74.0 |
| 732.0 | 9263.4 | 12.5 | 6.8 | 66.0 |
| 700.0 | 10492.3 | 9.8 | 4.2 | 68.0 |
| 643.4 | 12779.9 | 5.4 | -0.0 | 68.0 |
| 600.4 | 14628.3 | 1.5 | -1.9 | 78.0 |

UPPER AIR DATA
 2300020558
 WHITE SANDS

STATION ALTITUDE 7016.00 FEET MSL
 1 AUG. 61 1130 HRS MDT
 ASCENSION NO. 553

GEODETIC COORDINATES
 32.4004° LAT DEG
 106.3703° LONG DEG

TABLE 19

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA | | INDEX OF REFRACTION |
|--------------------------------|-----------------------|--|----------------------|------------------------------|----------------------------|--------------------------|----------------|---------------------------|
| | | | | | | DIRECTION DEGREES(TN) | SPEED KNOTS | |
| 599.0 | 685.1 | 24.7 | 55.0 | 1225.3 | 674.8 | 95.0 | 7.0 | 1.000302 |
| 400.0 | 682.8 | 24.7 | 55.1 | 1025.0 | 674.8 | 95.1 | 7.0 | 1.000302 |
| 450.0 | 672.5 | 22.7 | 54.2 | 1014.0 | 672.5 | 92.7 | 6.0 | 1.000297 |
| 500.0 | 652.5 | 20.9 | 63.3 | 1007.2 | 670.3 | 105.0 | 5.2 | 1.000292 |
| 550.0 | 677.5 | 19.5 | 65.7 | 990.4 | 668.7 | 113.0 | 4.3 | 1.000287 |
| 600.0 | 622.8 | 18.2 | 67.7 | 977.2 | 667.2 | 124.4 | 3.6 | 1.000281 |
| 650.0 | 605.3 | 17.0 | 69.7 | 964.3 | 665.7 | 138.0 | 3.2 | 1.000276 |
| 700.0 | 794.0 | 15.3 | 71.7 | 951.6 | 664.2 | 153.8 | 2.9 | 1.000270 |
| 750.0 | 780.0 | 14.5 | 73.6 | 939.0 | 662.7 | 166.5 | 1.7 | 1.000265 |
| 800.0 | 746.1 | 13.9 | 72.5 | 924.6 | 661.9 | 287.5 | .6 | 1.000259 |
| 850.0 | 752.4 | 13.3 | 70.7 | 910.0 | 661.2 | 330.7 | 2.5 | 1.000253 |
| 900.0 | 739.0 | 12.3 | 68.9 | 895.6 | 660.5 | 340.5 | 4.6 | 1.000247 |
| 950.0 | 725.7 | 12.0 | 68.0 | 882.3 | 659.5 | 347.2 | 6.7 | 1.000241 |
| 1000.0 | 712.6 | 10.9 | 68.0 | 870.0 | 658.1 | 342.4 | 8.7 | 1.000235 |
| 1050.0 | 699.3 | 9.8 | 68.0 | 857.8 | 656.8 | 341.9 | 10.7 | 1.000230 |
| 1100.0 | 687.0 | 3.8 | 66.0 | 845.2 | 655.6 | 346.8 | 12.7 | 1.000225 |
| 1150.0 | 674.5 | 7.9 | 66.0 | 832.7 | 654.4 | 350.7 | 14.9 | 1.000220 |
| 1200.0 | 662.2 | 6.9 | 62.0 | 820.5 | 653.2 | 353.6 | 14.6 | 1.000216 |
| 1250.0 | 650.1 | 5.9 | 68.0 | 808.4 | 652.0 | 357.4 | 11.6 | 1.000211 |
| 1300.0 | 638.1 | 4.9 | 69.2 | 796.5 | 650.8 | 3.9 | 8.7 | 1.000207 |
| 1350.0 | 626.3 | 3.9 | 71.9 | 784.8 | 649.6 | | | 1.000204 |
| 1400.0 | 614.7 | 2.6 | 74.6 | 773.3 | 648.3 | | | 1.000200 |
| 1450.0 | 603.3 | 1.3 | 77.3 | 761.9 | 647.0 | | | 1.000197 |

STATION ALTITUDE 1979.00 FEET MSL
 18 AUG. 81 1130 HRS MDT
 ASCENSION NC. 558

MANDATORY LEVELS
 2300020559
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.17033 LON DEG

TABLE 20

| PRESSURE GEOPOTENTIAL | | TEMPERATURE | | REL. HUM. | | WIND DATA | |
|-----------------------|--------|------------------------------|------------------------|-----------|--|--------------------------|----------------|
| MILLIBARS | FEET | AIR DEGREES CENTIGRADE | DEWPOINT CENTIGRADE | PERCENT | | DIRECTION DEGREES(TN) | SPEED KNOTS |
| 850.0 | 5000. | 20.5 | 13.5 | 44. | | 106.2 | 5.0 |
| 800.0 | 6780. | 16.3 | 11.0 | 71. | | 146.9 | 3.0 |
| 750.0 | 8584. | 13.2 | 8.0 | 70. | | 133.5 | 2.8 |
| 700.0 | 10462. | 9.8 | 4.2 | 68. | | 141.9 | 10.6 |
| 650.0 | 12491. | 5.9 | .5 | 68. | | 157.4 | 11.6 |

STATION ALTITUDE 1059.00 FEET MSL
18 AUG. 51 1200 HRS M DT
ASCENSION NC. 559

SIGNIFICANT LEVEL DATA
23UC020559
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 21

| PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET | TEMPERATURE | | REL. HUM. PERCENT |
|--|---------------------------|---------------------|----------------------|
| | AIR DEGREES CENTIGRADE | DEWPOINT PERCENT | |
| 382.7 1989.0 | 26.7 | 15.1 | 49.0 |
| 872.8 4315.1 | 24.1 | 13.0 | 50.0 |
| 950.0 5072.9 | 21.1 | 11.4 | 54.0 |
| 777.8 7573.1 | 14.8 | 3.5 | 60.0 |
| 751.6 9270.3 | 12.1 | 5.0 | 62.0 |
| 722.2 9626.4 | 11.4 | 4.2 | 61.0 |
| 700.0 10481.9 | 9.1 | 5.5 | 70.0 |
| 441.6 12841.0 | 4.9 | -1 | 70.0 |
| 556.4 16615.4 | -2.7 | -5.0 | 24.0 |
| 540.0 17396.7 | -2.5 | -12.0 | 48.0 |
| 500.0 19394.3 | -5.7 | -13.7 | 53.0 |
| 491.6 19831.0 | -6.0 | -24.7 | 21.0 |
| 467.4 21174.9 | -8.5 | -25.4 | 24.0 |
| 459.6 21553.9 | -9.1 | -20.8 | 38.0 |
| 452.0 21977.6 | -10.3 | -16.7 | 53.0 |
| 429.6 23259.1 | -13.3 | -20.6 | 54.0 |
| 421.8 23717.4 | -14.3 | -23.3 | 16.0 |
| 400.0 25036.9 | -16.1 | -26.0 | 16.0 |
| 337.4 29183.7 | -24.8 | -41.6 | 19.0 |
| 700.0 31950.6 | -33.1 | -46.7 | 24.0 |

STATION ALTITUDE 3929.00 FEET MSL
12 AUG. 81 1230 HRS MDT
ASCENSION MC. 559

UPPER AIR DATA
2300020559
WHITE SANDS

TABLE 22

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES | DEWPOINT CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CM ³ | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(TN) | SPEED KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|----------------------------|------------------------|----------------------|-------------------------------|----------------------------|---------------------------------------|----------------|---------------------------|
| 3989.0 | 892.7 | 26.7 | 15.1 | 49.0 | 1018.0 | 677.1 | 170.0 | 2.0 | 1.000299 |
| 4000.0 | 882.4 | 26.6 | 15.0 | 49.0 | 1017.9 | 677.0 | 169.8 | 2.0 | 1.000299 |
| 4300.0 | 867.2 | 23.4 | 12.7 | 51.0 | 1012.3 | 673.0 | 160.9 | 3.1 | 1.000289 |
| 5000.0 | 852.2 | 21.4 | 11.6 | 53.6 | 1001.8 | 670.6 | 153.3 | 3.4 | 1.000283 |
| 5500.0 | 837.2 | 20.0 | 11.0 | 56.0 | 988.9 | 669.0 | 147.0 | 3.8 | 1.000278 |
| 6000.0 | 822.5 | 18.8 | 10.5 | 58.4 | 975.8 | 667.6 | 141.8 | 4.1 | 1.000274 |
| 6500.0 | 808.0 | 17.5 | 9.9 | 60.8 | 962.0 | 666.1 | 130.6 | 3.6 | 1.000269 |
| 7000.0 | 793.8 | 16.2 | 9.3 | 63.2 | 950.2 | 664.6 | 127.4 | 2.9 | 1.000265 |
| 7500.0 | 779.8 | 15.0 | 8.6 | 65.6 | 937.7 | 663.1 | 206.7 | 1.7 | 1.000260 |
| 8000.0 | 765.9 | 14.1 | 7.6 | 65.0 | 924.0 | 662.0 | 290.0 | 1.3 | 1.000254 |
| 8500.0 | 752.2 | 13.3 | 6.6 | 63.8 | 910.2 | 661.0 | 336.1 | 3.0 | 1.000248 |
| 9000.0 | 738.8 | 12.5 | 5.6 | 62.6 | 896.7 | 660.0 | 449.3 | 5.7 | 1.000242 |
| 9500.0 | 725.5 | 11.6 | 4.5 | 61.4 | 883.6 | 658.9 | 552.6 | 7.1 | 1.000236 |
| 10000.0 | 712.4 | 10.4 | 4.8 | 68.4 | 871.3 | 657.5 | 655.8 | 8.6 | 1.000235 |
| 10500.0 | 699.5 | 9.1 | 5.4 | 77.9 | 859.3 | 656.1 | 757.3 | 9.6 | 1.000234 |
| 11000.0 | 686.7 | 8.2 | 4.3 | 76.2 | 846.5 | 654.9 | 858.9 | 9.6 | 1.000228 |
| 11500.0 | 674.2 | 7.3 | 3.1 | 74.5 | 833.9 | 653.8 | 958.8 | 9.9 | 1.000223 |
| 12000.0 | 661.5 | 6.4 | 1.9 | 72.9 | 821.5 | 652.7 | 1058.5 | 10.3 | 1.000217 |
| 12500.0 | 649.7 | 5.5 | 7 | 71.2 | 809.2 | 651.5 | 1158.5 | 10.8 | 1.000212 |
| 13000.0 | 637.8 | 4.6 | -3 | 70.6 | 797.1 | 650.4 | 1258.5 | 11.5 | 1.000207 |
| 13500.0 | 625.8 | 3.6 | -9 | 72.4 | 785.1 | 649.2 | 1358.5 | 12.3 | 1.000203 |
| 14000.0 | 614.1 | 2.6 | -1.5 | 74.3 | 773.3 | 648.0 | 1458.5 | 12.4 | 1.000200 |
| 14500.0 | 602.7 | 1.6 | -2.2 | 76.2 | 761.7 | 646.8 | 1558.5 | 12.7 | 1.000196 |
| 15000.0 | 591.4 | .6 | -2.6 | 76.0 | 750.3 | 645.5 | 1658.5 | 11.8 | 1.000192 |
| 15500.0 | 580.3 | -5 | -3.5 | 79.9 | 739.1 | 644.3 | 1758.5 | 11.3 | 1.000189 |
| 16000.0 | 569.5 | -1.5 | -4.2 | 91.7 | 728.0 | 643.1 | 1858.5 | 10.8 | 1.000185 |
| 16500.0 | 558.8 | -2.5 | -4.9 | 83.6 | 717.1 | 641.9 | 1958.5 | 9.3 | 1.000182 |
| 17000.0 | 548.3 | -2.6 | -6.0 | 66.3 | 704.3 | 641.5 | 2058.5 | 7.8 | 1.000174 |
| 17500.0 | 537.9 | -2.7 | -12.1 | 48.3 | 691.5 | 641.3 | 2158.5 | 6.0 | 1.000167 |
| 18000.0 | 527.6 | -3.5 | -12.5 | 49.5 | 680.4 | 640.3 | 2258.5 | 4.6 | 1.000164 |
| 18500.0 | 517.5 | -4.3 | -12.9 | 50.8 | 669.4 | 639.3 | 2358.5 | 3.7 | 1.000161 |
| 19000.0 | 507.7 | -5.1 | -13.4 | 52.0 | 658.6 | 638.4 | 2458.5 | 3.2 | 1.000158 |
| 19500.0 | 498.0 | -5.8 | -15.7 | 45.3 | 647.9 | 637.5 | 2558.5 | 3.7 | 1.000154 |
| 20000.0 | 488.4 | -6.3 | -24.8 | 21.4 | 637.2 | 636.6 | 2658.5 | 4.4 | 1.000146 |
| 20500.0 | 478.9 | -7.3 | -25.0 | 22.6 | 627.2 | 635.4 | 2758.5 | 5.2 | 1.000144 |
| 21000.0 | 469.7 | -8.3 | -25.3 | 23.7 | 617.3 | 634.3 | 2858.5 | 6.1 | 1.000142 |
| 21500.0 | 460.6 | -9.0 | -21.2 | 36.2 | 606.0 | 633.4 | 2958.5 | 6.8 | 1.000141 |
| 22000.0 | 451.6 | -10.4 | -16.8 | 56.9 | 597.8 | 632.0 | 3058.5 | 7.1 | 1.000142 |
| 22500.0 | 442.7 | -11.5 | -16.3 | 57.0 | 588.8 | 630.5 | 3158.5 | 7.6 | 1.000139 |
| 23000.0 | 434.0 | -12.7 | -19.8 | 55.0 | 579.9 | 629.1 | 3258.5 | 8.5 | 1.000136 |

UPPER AIR DATA
2300020559
WHITE SANDS

STATION ALTITUDE 39,900 FEET MSL
1 AUG. 91 1230 HRS MDT
ASCENSION NO. 559

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 22 CON'T

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE | | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND | | WIND DATA | | INDEX OF REFRACTION |
|--------------------------------|-----------------------|------------------------------|------------------------|----------------------|------------------------------|----------------|-------|--------------------------|----------------|---------------------------|
| | | AIR DEGREES CENTIGRADE | DEWPOINT CENTIGRADE | | | KNOTS | KNOTS | DIRECTION DEGREES(TN) | SPEED KNOTS | |
| 23500.0 | 425.5 | -13.8 | -25.9 | 35.1 | 571.2 | 627.6 | 246.2 | 246.2 | 9.5 | 1.000111 |
| 24000.0 | 417.0 | -14.7 | -33.9 | 17.6 | 561.9 | 626.4 | 245.1 | 245.1 | 10.8 | 1.000127 |
| 24500.0 | 403.7 | -15.4 | -34.9 | 16.8 | 552.2 | 625.6 | 245.2 | 245.2 | 12.8 | 1.000125 |
| 25000.0 | 400.6 | -16.0 | -35.9 | 16.1 | 542.7 | 624.7 | 245.3 | 245.3 | 14.8 | 1.000122 |
| 25500.0 | 392.5 | -17.1 | -36.6 | 16.3 | 533.8 | 623.5 | 244.9 | 244.9 | 16.7 | 1.000120 |
| 26000.0 | 384.5 | -18.1 | -37.3 | 16.7 | 525.1 | 622.2 | 244.4 | 244.4 | 17.7 | 1.000118 |
| 26500.0 | 376.7 | -19.2 | -37.9 | 17.1 | 516.6 | 620.9 | 244.8 | 244.8 | 18.9 | 1.000116 |
| 27000.0 | 369.0 | -20.2 | -38.6 | 17.4 | 508.2 | 619.6 | 248.5 | 248.5 | 19.7 | 1.000114 |
| 27500.0 | 361.5 | -21.3 | -39.3 | 17.8 | 499.9 | 618.4 | 251.9 | 251.9 | 20.5 | 1.000113 |
| 28000.0 | 354.2 | -22.3 | -40.0 | 18.1 | 491.8 | 617.1 | 256.0 | 256.0 | 21.9 | 1.000111 |
| 28500.0 | 347.0 | -23.4 | -40.7 | 18.5 | 483.9 | 615.8 | 260.0 | 260.0 | 23.7 | 1.000109 |
| 29000.0 | 340.0 | -24.4 | -41.4 | 18.9 | 476.0 | 614.5 | 263.5 | 263.5 | 25.6 | 1.000107 |
| 29500.0 | 332.9 | -25.7 | -42.2 | 19.6 | 468.7 | 612.8 | 265.6 | 265.6 | 27.0 | 1.000105 |
| 30000.0 | 325.9 | -27.2 | -43.0 | 20.5 | 461.4 | 611.0 | | | 28.4 | 1.000104 |
| 30500.0 | 319.1 | -28.7 | -43.9 | 21.4 | 454.7 | 609.1 | | | | 1.000102 |
| 31000.0 | 312.4 | -30.2 | -44.6 | 24.3 | 447.9 | 607.2 | | | | 1.000100 |
| 31500.0 | 305.8 | -31.7 | -45.8 | 23.2 | 441.2 | 605.3 | | | | 1.000099 |

STATION ALTITUDE 3029.00 FEET MSL
 18 AUG. 51
 ASCENSION NO. 554

MANDATORY LEVELS
 2300020559
 WHITE SANDS

GEODETTIC COORDINATES
 32.40843 LAT DEG
 106.37033 LON DEG

TABLE 23

| PRESSURE GEOPOTENTIAL | | TEMPERATURE | | REL. HUM. PERCENT | WIND DATA | |
|-----------------------|--------|------------------------------|------------------------|----------------------|--------------------------|----------------|
| MILLIBARS | FEET | AIR DEGREES CENTIGRADE | DEWPOINT CENTIGRADE | | DIRECTION DEGREES(TN) | SPEED KNOTS |
| 850.0 | 5069. | 21.1 | 11.4 | 54. | 152.4 | 3.5 |
| 800.0 | 6781. | 16.8 | 9.5 | 62. | 164.3 | 3.1 |
| 750.0 | 8576. | 13.2 | 6.5 | 64. | 339.4 | 3.4 |
| 700.0 | 10471. | 9.1 | 5.5 | 78. | 356.9 | 9.6 |
| 650.0 | 12477. | 5.5 | .7 | 71. | 8.5 | 10.7 |
| 600.0 | 14413. | 1.3 | -2.3 | 77. | 13.5 | 12.2 |
| 550.0 | 16895. | -2.6 | -7.2 | 70. | 341.2 | 8.0 |
| 500.0 | 19367. | -5.7 | -13.7 | 53. | 274.1 | 3.5 |
| 450.0 | 22056. | -10.6 | -17.1 | 59. | 258.1 | 7.2 |
| 400.0 | 24995. | -16.1 | -36.0 | 16. | 245.3 | 14.9 |
| 350.0 | 28250. | -22.9 | -40.4 | 18. | 258.4 | 23.0 |
| 300.0 | 31886. | -33.1 | -46.7 | 24. | | |

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